



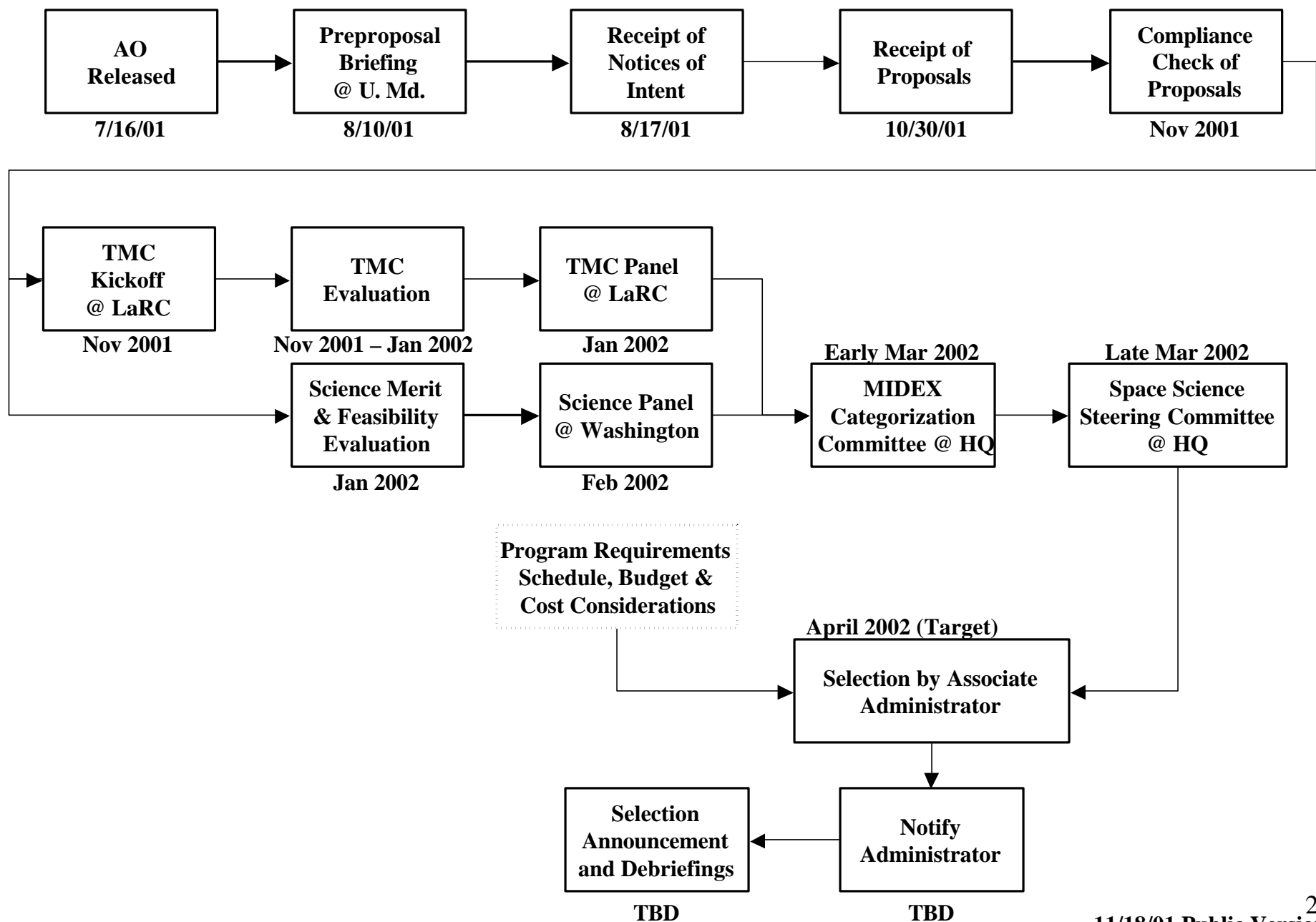
Explorer Workshop
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The Explorer AO and Selection Process

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MIDEX 2001 AO Evaluation Flow



Creating the AO

Using preliminary MDEX 2001 schedule as an example

Milestone	Date	Months
Explorer Team Meeting Discussion	28-Sep-00	-9.25
Initial Draft to HQ	19-Dec-00	-6.50
Release Draft AO for community review	21-Feb-01	-4.25
Release AO	01-Jul-01	0.00
Proposals due	29-Sep-01	3.00
Target Date for Selection for Phase A	19-Jan-02	6.75
Target Date for Selection for Flight	17-Sep-02	14.75
First Launch	16-Sep-06	63.50

Creating the AO

Milestone	Date	Months
Explorer Team Meeting Discussion	28-Sep-00	-9.25
Resolve Key Issues with OSS Senior Management	01-Nov-00	-8.00
Initial Draft to HQ	19-Dec-00	-6.50
Deadline for HQ comments	09-Jan-01	-5.75
Community Draft version to HQ	30-Jan-01	-5.00
Release Draft AO for community review	21-Feb-01	-4.25
Community comments due	23-Mar-01	-3.25
AO to HQ for Approval	13-Apr-01	-2.75
AO approved by AA/OSS	08-Jun-01	-0.75
Release AO	01-Jul-01	0.00
Preproposal Briefing	15-Jul-01	0.50
Notice of Intent due	31-Jul-01	1.00
Proposals due	29-Sep-01	3.00
Non-U.S. Letters of Endorsement due	29-Oct-01	4.00

Creating the AO

Milestone	Date	Months
Proposals due	29-Sep-01	3.00
Non-U.S. Letters of Endorsement due	29-Oct-01	4.00
TMCO Review	10-Nov-01	4.50
Science Review	28-Nov-01	5.00
Categorization	19-Dec-01	5.75
Steering	09-Jan-02	6.50
Target Date for Selection for Phase A	19-Jan-02	6.75
Phase A Kickoff	18-Feb-02	7.75
Concept Study Report due	18-Jun-02	11.75
TMCO Review	30-Jul-02	13.25
Site Visits Complete	20-Aug-02	13.75
TMCO Review	03-Sep-02	14.25
Target Date for Selection for Flight	17-Sep-02	14.75
First Launch	16-Sep-06	63.50

AO Requirements Matrix

Using preliminary MDEX 2001 matrix as an example

AO Release Date	June 18, 2001	Same
Launch Dates	NLT September 30, 2007	No launch date requirement. Sponsor must require NASA commitment NLT December 31, 2003 or wait for next AO
Eligible Science Themes	ASO, SEC, SEU (SEU includes fundamental physics)	Same
Ineligible Missions	Explorer missions that are intended to achieve science goals of missions already in the Strategic Plan for a similar time period (that is, proposed for launch by mid 2007) may not be proposed for consideration by this AO	Same
Characterization of Each Program	Defined by maximum allowable OSS cost and allowed ELVs	Participation in a non-OSS space program
OSS Cost Caps	\$170M (FY02) includes NIAT and ELV increase. Phases A through E costs included. Note: Last MDEX cap was \$140M (FY98) = \$160M (FY02).	\$35M (FY02) Phases A through E costs included Last Discovery was \$35M (FY01)
Contributions Limit	33% of proposed OSS cost	No limit.
Additional Costs	Extended mission MO&DA: Solicit but outside the cap. Guest Observer programs: Encouraged and outside the cap Note: Similar to Discovery	N/A
Implementation Options	<ul style="list-style-type: none"> •Complete Missions <ul style="list-style-type: none"> - ELV free flyer - Shuttle free flyer 	Self-contained investigation (NASA receives data) that is part of non-OSS mission <ul style="list-style-type: none"> - ISS attached is allowed (like SMEX) - LDB

AO Requirements Matrix

Using preliminary MDEX 2001 schedule as an example

Allow Instrument-only?	No	Yes
Allow Shuttle Attached?	No	Same
ISS Opportunities?	No	Yes
NASA-provided Launch Options	•ELV •Shuttle (free) Action: Check with Code M	•No - except ISS
NASA-provided ELV Options	Taurus 2210, Taurus 2110, Pegasus XL, NLS Moderate-class (D2325/D2326)	•No
Secondary or Co-manifest Launch Options?	Yes, using NASA-approved launch service provider.	Same
Spartan 400 as GFE?	Yes	Not Applicable
Evaluation Criteria	•Science Merit •Technical Merit and Feasibility •Mission Implementation Approach including Cost Risk E/PO, Technology, SDB deferred to Phase A	Same
Evaluation Criteria Weighting	First two criteria of equal weight Third criteria of less weight.	Same
Evaluation process	•Evaluate all criteria •Categorize. •Steering Committee Review	Same
Selection process	Select up to 4 investigations for up to \$450K each for four-month Phase A Concept Study. Downselect to 2, based on Concept Study	Select zero or any number of investigations for \$250K Phase A Concept Study. Proceed or not, depending on Study. Option to select for flight after non-competitive Phase A Concept Study.
Minimum Science defined in proposal?	Yes. Characterize as Minimum <u>Mission</u> and define carefully in AO	No.

AO Requirements Matrix

Using preliminary MDEX 2001 schedule as an example

Minimum Science defined in proposal?	Yes. Characterize as Minimum <u>Mission</u> and define carefully in AO	No.
E/PO, Technology, and SDB	AO require that PI (i) state commitment to NASA goals in proposal and (ii) give general outline or vision of anticipated E/PO program, but no implementation details (budgets, schedule, letters, named partners) required. Vision will not be evaluated. Detailed plans will be defined and evaluated as part of Phase A Concept Study.	Same
Cost Growth	Allow up to 20% cost growth during Phase A but not to exceed OSS Cap. No growth after Phase A. 20% cost reserves are required at Confirmation (Phase B to Phase C).	Same
Mission Phases Required	Phases A through E	Same
Full Cost Accounting	Yes	Same
Preproposal conference?	Yes	Same
Acquisition Options	Contract or Cooperative Agreement	Grant, Contract, or Cooperative Agreement
Community Review of Draft AO?	Yes	Same
Requirements for Co-I's	Same as in SMEX AO. Must be included in budget if NASA funds. Must have letter of commitment if contributed.	Same
Potential for Technology Development Funding?	Yes.	No
Technology Funding for Category IV?	No	Same
Include S/C as eligible for Tech Funding?	Yes, if Category III. Not Category I.	Not Applicable

AO Requirements Matrix

Using preliminary MDEX 2001 schedule as an example

International participation	Use Discovery model. Required appendices with draft international participation plan and outline of technical requirements.	Same
Offer GSFC services in AO?	Yes	Same
Compliance	No specific checklist	Same
GSFC presentations at Preproposal conference (not AO item per se)	<ul style="list-style-type: none">•By Explorer Program Office•For GFE items (e.g., Sp400, ISS)	Same
Font Size	Add specification for tables, graphs, drawings, etc.	Same

Cost Cap vs. Launch Rate

- Explorer development budget is ~\$150M/yr
 - Does not include MO&DA (~15%)
- Budget must support
 - MINDEX is ~\$160M (excludes MO&DA)
 - SMEX is ~\$75M (excludes MO&DA)
 - Program overhead (AO's, concept studies, etc.) is ~\$10M
- So current budget supports 2 MINDEX and 2 SMEX every 3.4 years (an AO every 1.7 years)
 - MO's delay AO's
- Raise cost cap by 20%
 - Reduces launch rate to 2 MINDEX and 2 SMEX every 4.0 years (an AO every 2.0 years)

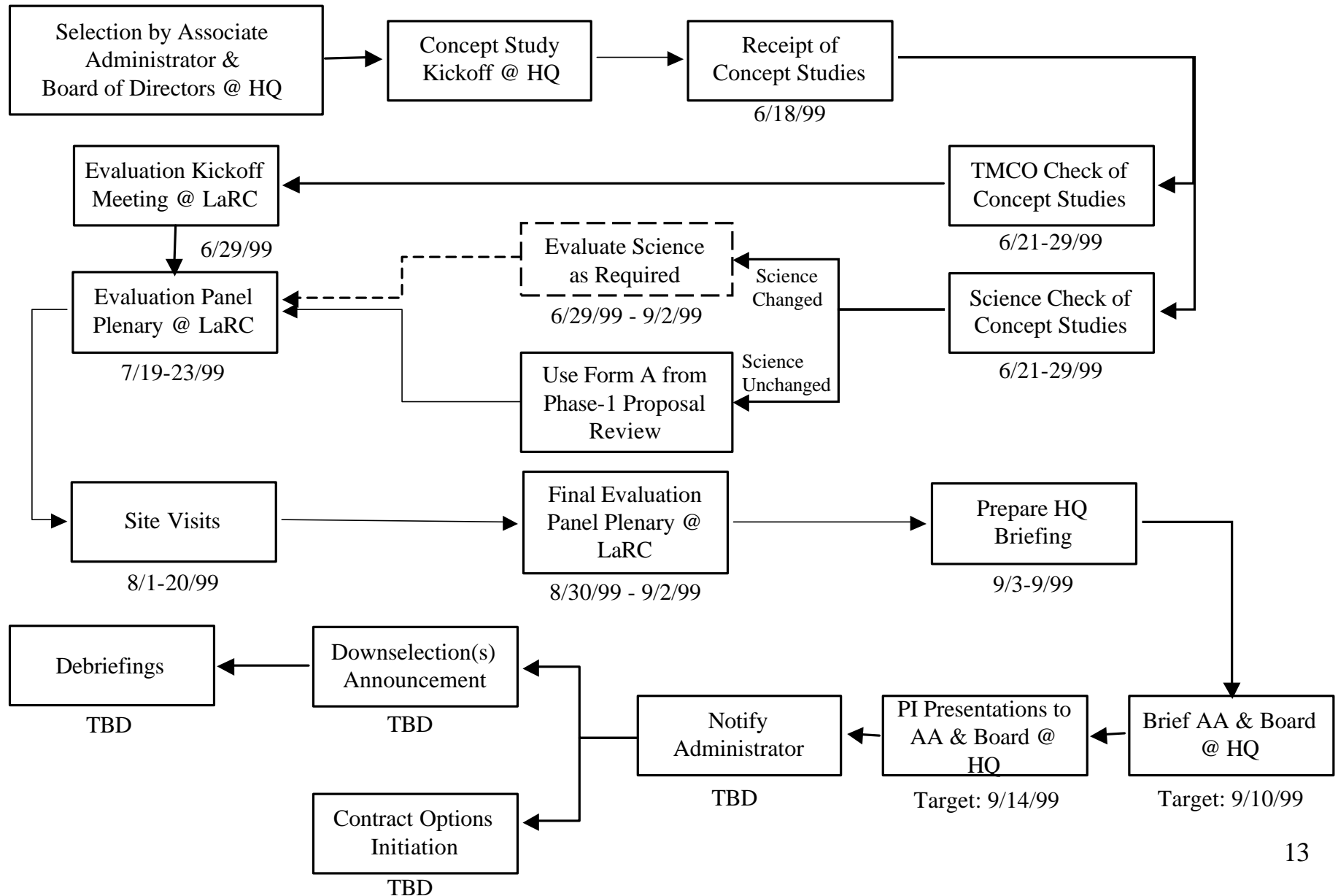
Missions of Opportunity

- Traditional
 - OSS contribution to international or non-OSS mission
- Small ISS Attached
- Long Duration Balloons
- Astrobiology Flight Experiments
 - Indoor science
- Data Buys
- Other??

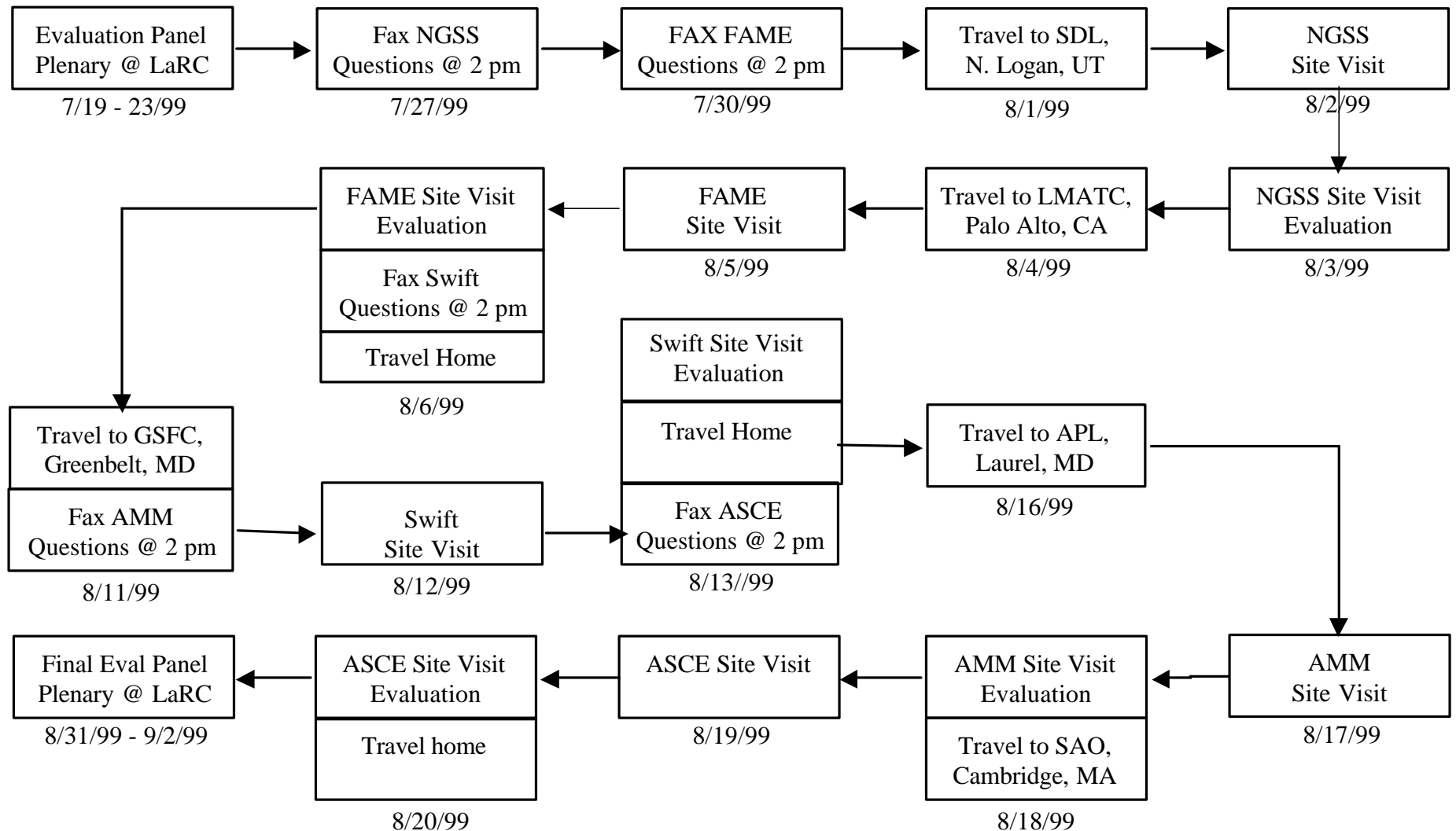
Other Constraints

- Contributions limit
- Science enhancement options
- GSFC services
- E/PO proposals
- Evaluation criteria (deferred discussion)
- Mission design requirements (deferred discussion)
- Launch options (deferred discussion)
- International partnering (deferred discussion)
- Other??

MIDEX Downselect Schedule/Evaluation Flow



MIDEX Downselect Site Visit Schedule



Downselect Options

- One Stage vs. Two Stage
 - Competitive downselect or not
- Format of site visit for downselect
 - At team site, at NASA
- Science evaluation
 - Reevaluate or not
- Science briefings to AA & Board
 - PI presents to HQ or not